# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/623,133 | 07/16/2003 | Viktor Varsa | 944-001.083-1 | 4482 |

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| 4955          7590          04/03/2007<br>WARE FRESSOLA VAN DER SLUYS &<br>ADOLPHSON, LLP<br>BRADFORD GREEN, BUILDING 5<br>755 MAIN STREET, P O BOX 224<br>MONROE, CT 06468 | EXAMINER<br>SMITH, MARCUS |

| ART UNIT | PAPER NUMBER |
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| 2616 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|---|---|---|
| 3 MONTHS | 04/03/2007 | PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 10/623,133 | VARSA ET AL. |
| | Examiner | Art Unit | |
| | Marcus R. Smith | 2616 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on *16 July 2003*.

2a) ☐ This action is **FINAL**.       2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) *1-31* is/are pending in the application:

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-31* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *16 July 2003* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *12/08/03, 8/04/04*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1.      The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

2.      Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

In claim 1, the jitter buffering capabilities cannot be determined as described in

the claim, since the difference between the pre-decoding buffering parameters provided

to the streaming server and the pre-decoding buffering parameters provided by the

streaming server is equal to zero. Thus the server cannot determine the buffering

capabilities, which makes the limitation indefinite.

3.      Claims 9-11 and 23-25 are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

Claims 9-11 and 23-25 uses an acronym RTSP in each claim, but does not state

in any claim what RTSP means. The applicant should write Real Time Streaming

Protocol (RTSP) in first claim that uses the acronym to overcome this rejection.

### *Claim Rejections - 35 USC § 102*

4.      The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.      Claims 1, 3-4, 6-8, 12-14, 16, 18-22, and 26-31 are rejected under 35

U.S.C. 102(e) as being anticipated by Despande (US 7,047,308).

with regard to claim 1, Despande teaches:

A client-server collaboration method for enabling packet transfer delay variation

compensation in a multimedia streaming system, in which a signal indicative of pre-

decoding buffering parameters is provided by a streaming server to a streaming client

(column 4, lines 25-34), and wherein the pre-decoding buffering parameters indicated

by the server are chosen such as to ensure that the client is able to play out a packet

stream without client buffer violation if the packet stream is transmitted over a constant

delay, reliable channel, said method comprising:

determining client's chosen pre-decoding buffering parameters (column 1, lines

50-55: These two factors must be determined by client side, before the client transmit its

buffering capacity.); and

providing information indicative of the client's chosen pre-decoding buffering

parameters to the server (column 4, lines 15-20), so that the client's jitter buffering

capabilities can be determined based on a difference between the pre-decoding

buffering parameters provided to the streaming server (the examiner is interpreted this

server as the client) and the pre-decoding buffering parameters provided by the

streaming server (column 4, lines 56-65).

with regard to claim 13, Despande teaches:

A streaming client device including at least one buffer, comprising:

means for receiving a packet stream from a streaming server (step 902: column

11, lines 5-10) and storing the packet stream in the at least one buffer (column 4, lines

22-25: The client has a buffer it holds the data until schedule to play out based on

buffering capacity.);

means for playing-out the packet stream (step 908: column 12, lines 35-43); and

means for providing information indicative of the client's chosen buffering

parameters to the streaming server (step 906: column 11, lines 9-11 and column 4, lines

14-19).

with regard to claim 27, Despande teaches:

A streaming server device comprising:

means for transmitting a packet stream to a streaming client device (step 902:

column 11, lines 5-10), and

means for receiving information indicative of chosen buffering parameters of the

streaming client device (step 906: column 11, lines 9-11 and column 4, lines 14-19).

with regard to claim 32, Despande teaches:

A data streaming system comprising:

a streaming client device (column 4, lines 1-5), and

a streaming server device (column 4, lines 1-5), wherein the streaming client

device comprises:

means for playing-out a packet stream provided by the streaming server device

(step 908: column 12, lines 35-43); and

means for providing information indicative of the client's chosen buffering

parameters to the streaming server device  (step 906: column 11, lines 9-11 and column

4, lines 14-19), and wherein the streaming server device comprises

means for transmitting the packet stream to the streaming client device (step

902: column 11, lines 5-10), and

means for receiving the information indicative of the client's chosen buffering

parameters (step 906: column 11, lines 7-11 and column 4, lines 14-19).

with regard to claims 3 and 19, Despande teaches:

wherein the client provides the information indicative of the client's chosen

buffering parameters to the server as soon as the client determines the pre-decoding

buffering parameters chosen to be used for a particular streaming session (column 6,

lines 1-30: The Client to Server frame transmit the Client's chosen buffer size.).

with regard to claims 4 and 20, Despande teaches:

wherein the client provides the information indicative of the client's chosen

buffering parameters to the server when starting a new streaming session (column 4,

lines 15-20 and column 11, lines 1-11: In step 902, the media stream is new.).

with regard to claims 6 and 29, Despande teaches:

applying in the streaming server rate-control and/or rate shaping algorithms that
utilize the information indicative of the client's chosen pre-decoding buffering
parameters to compensate for packet transfer delay and channel rate variations
(column 5, lines 1-30: the server uses the information from client's buffering capacities
(Cnew) to determine in the but bit rate needs to change.)

with regard to claims 7 and 30, Despande teaches:

wherein the streaming server optionally considers the information indicative of
the client's chosen buffering parameters in rate control and/ or rate shaping (column 10,
lines 8-25: case 3: The examiner views the server that does not have to act on the
information by increasing the rate of transmission as optionally considering the
information.).

with regard to claims 8, 22, and 31, Despande teaches:

A method according to claim 1, wherein the information indicative of the client's
chosen buffering parameters includes at least one of the following:

information regarding a size of the client's pre-decoder buffer (Buffer level:
column 6, lines 24-32),

information regarding a pre-decoder buffering period, and

information regarding a post-decoder buffering time.

with regard to claims 12, Despande teaches:

A method according to claim 1, further comprising determining in the streaming
client whether the streaming server supports the signaling of client buffering parameters
(column 7, lines 1-8).

with regard to claim 14, Despande teaches:

A streaming client device according to claim 13, wherein said at least one buffer comprises a pre-decoder buffer and a delay jitter buffer (column 8, lines 15-22: Since the buffering deals with jitter and out of order packets, the examiner can view the buffer as being both the jitter buffer and pre-decoder buffer.).

with regard to claim 16, Despande teaches (see claim 14):

A streaming client device according to claim 14, wherein the pre-decoder buffer and delay jitter buffer are integrated as a single unit (column 8, lines 15-22).

with regard to claim 18, Despande teaches:

A streaming client device according to claim 13, further comprising means for receiving an indication of pre-decoder buffering parameters chosen by the streaming server (column 4, lines 24-28).

with regard to claim 28, Despande teaches:

A streaming server device according to claim 27, adapted to provide a signal indicative of pre-decoding buffering parameters to the streaming client, wherein said pre-decoding buffering parameters indicated by the server are chosen such as to ensure that the client device is able to play out the packet stream without client buffer violation if the packet stream is transmitted over a constant delay, reliable channel (column 4, lines 14-34).

## Claim Rejections - 35 USC § 103

6.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.    Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Despande (US 7,047,308) in view of Graf (US 6,085,221).

Despande discloses all of the subject matter as described above except wherein

the pre-decoder buffer parameters provided by the server to the client are chosen

based on the variable bit-rate characteristics of the transmitted packet stream and the

buffering applied by the server.

Graf teaches how video server chooses the buffer parameters based on the peak

rate and receiver's buffer size (column 7, lines 62-67 through column 8, lines 1-7) in

order to reduce burstiness and additional jitters (column 2, lines 29-34).

Therefore it would have been obvious to one having ordinary skill in the art at the

time invention was made to for server chose parameters based on bit rate and the

server buffering as taught by Graf in the system of Despande in order to reduce

burstiness and additional jitters.

8.    Claims 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Despande in view Paul et al. (7,185,070).

Despande discloses all of the subject matter as described above except wherein the client is adapted to dynamically change its buffering parameters during a streaming session, providing further information indicative of the client's changed buffering parameters to the server during the streaming session.

Paul et al. teaches a method where client dynamically adjusting the buffer parameter in response to changing network (column 12, lines 39-46) in order to establish and maintain a guarantee QoS for user applications.

Therefore it would have been obvious to one having ordinary skill in the art at the time invention was made to for the client to dynamically change its buffer parameters as taught by Paul et al. in the system of Despande in order to establish and maintain a guarantee QoS for user applications.

Since it would be obvious for the client to change its parameter, in which it changes the network delivery requirement, it would have to provide that new information to the server in the capabilities exchange process similar the one described in column 6, lines 10-31.

9.      Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Despande in view of Zhu et al. (US 6,085.252).

A streaming client device according to claim 13, wherein said at least one buffer comprises a pre-decoder buffer and a delay jitter buffer (column 8, lines 15-22: Since the buffering deals with jitter and out of order packets, the examiner can view the buffer as being both the jitter buffer and pre-decoder buffer.).

Despande discloses all of the subject matter as described above except for post decoder buffer.

Zhu et al. teaches a bit stream buffer (318: "post decoder buffer") after packet processor (304: "decoder") in order to minimizing error after the smoothing delay (column 7, lines 25-45)

Therefore it would have been obvious to one having ordinary skill in the art at the time invention was made to have a bit stream buffer as taught by Zhu et al. in the system of Despande in order to minimizing error after the smoothing delay.

with regard to claim 17, Despande teaches:

A streaming client device according to claim 15, wherein the pre-decoder buffer and delay jitter buffer are integrated as a single unit (column 8, lines 15-22: Since the buffering deals with jitter and out of order packets, the examiner can view the buffer as being both the jitter buffer and pre-decoder buffer.).

### Allowable Subject Matter

10.     Claims 9-11 and 23-25 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus R. Smith whose telephone number is 571 270 1096. The examiner can normally be reached on Mon-Fri. 7:30 am - 5:00 pm every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau Nguyen can be reached on 571 272-3126. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRS 3/27/07

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